



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,229	07/22/2003	Manuel Marquez-Sanchez	67079	6970
48940	7590	10/03/2005	EXAMINER	
KRAFT / FETF 120 S. LASALLE STREET SUITE 1600 CHICAGO, IL 60603-3406			DRODGE, JOSEPH W	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/624,229

Applicant(s)

MARQUEZ-SANCHEZ ET AL.

Examiner

Joseph W. Drodge

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1723

Claims 1-27 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In each of the independent claims 1,10,13 and 19, scope of the terminology "more effective for removing the solute from a fluid...relative to an inorganic gel coating that has not been molecularly imprinted" is unclear, since neither types of solute or types of fluid have been recited, neither has any of the filtering parameters such as pressure, temperature, filter pore size, etc.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3,5-7,9,19 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Doktycz et al PGPUBS document US2004/0173506 published 09/09/2004.

Doktycz et al disclose an adsorbent (paragraph 46) polymeric filter material comprising fibrous support material with amino groups [as in claim 3] ( paragraphs 14,50,97 and 98), adsorbent gel coating adhered thereto, such as silica or silane/gel or hydrogel [as in claims 5-7 ], (paragraph 96). The fibers are also molecularly specialized, i.e. imprinted for the sorbtion, removal and/or sensing of specific biological substances on a molecular scale (paragraphs 6,7,18,19,48,100 and 101).

Art Unit: 1723

For method claims starting with claim 19, see paragraph 18 concerning filtration of various medical, and biomedical solutes from cellular fluids.

Claim language pertaining to method of forming the gel coating on the fibrous support material by templating has been given little patentable weight, since no corresponding structure or method steps are present in the instant claims, the methods of imparting adhering a gel coating material to a fibrous support material having charged groups is deemed to be equivalent.

Claim 2 merely alludes to a solute removal process, so does not define further apparatus structure.

For claim 9, the filter is described without an accompanying housing or enclosure, and as forming a "self-assembly" hence inherently self-supporting, in paragraph 4.

#### ALLOWABLE SUBJECT MATTER

Claims 10-18 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. Independent claims 10 and 13 distinguish over the closest prior art, encompassing Doktycz et al and the Vu et al publication "A facile method to deposit zeolites Y and L onto cellulose fibers" in view of the recited method step of "molecularly imprinting the solute on the inorganic gel coating with the template molecules present during formation of the inorganic gel coating". Although Doktycz et al teach formation of molecular

Art Unit: 1723

imprinting of molecular fibers and a gel coating, imprinting with template molecules is not envisioned. Vu et al and other publications teach formation of a coated fibrous filter by depositing gel or semi-solid material onto a fibrous substrate by processes including heating, pressurizing, and chemical bonding, not however suggesting "molecular imprinting with a template technique.

Claims 4,8 and 21-27 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 4 would distinguish in view of recitation of the fibrous support material comprising cellulose. It is deemed not apparent to combine the cellulose fiber filter of Wei with Doktycz et al, since Wei does not suggest a fibrous filter with fiber having coating that has been molecularly imprinted.

Each of claims 8,21 and 22 would distinguish in view of recitation of molecularly imprinting the membrane gel coating for caffeine or purifying a fluid comprising caffeine.

Each of claims 22,24 and 27 would distinguish in view of recitation of treating a fluid comprising a lipid-containing material.

Claim 25 would distinguish in view of recitation of the treated solute comprising a pesiticide or herbicide.

Claim 26 would distinguish in view of treating a fluid comprising a natural food matrix.

Applicant's arguments filed on August 8, 2005 have been fully considered but they are not persuasive. It is argued that the claims are not indefinite since the

Art Unit: 1723

Specification refers to solutes such as caffeine, cholesterol and dissolved organic compounds and specific fluids including tea, coffee and water. However, it is submitted that such solutes and fluids are quite varied, and it is unclear in most of the claims which of such fluids and solutes are targeted for removal of a given percentage of solute, or improvement in such percentage, and under what separation conditions.

Arguments pertaining to rejection of claims on the merit are moot in view of the newly applied reference.

Art Unit: 1723


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached at 571-272-1151. The fax phone number for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

September 27, 2005

  
JOSEPH DRODGE  
PRIMARY EXAMINER